REMARKS

This application has been carefully reviewed in light of the Office Action dated February 16, 2005. Claims 1 to 5 and 15 to 18 are in the application, of which Claims 1 and 15 are independent. Reconsideration and further examination are respectfully requested.

Claims 6 to 14, which were withdrawn from further examination on the merits pursuant to a restriction requirement which has now been made final, have been cancelled without prejudice or disclaimer of subject matter, and without prejudice to Applicant's right to file a divisional application.

Claims 1, 3 to 5 and 5 to 18 were rejected under 35 U.S.C. § 102(e) over U.S. Patent 6,335,983 (McCarthy '983), and Claim 2 was rejected under § 103(a) over McCarthy '983 in view of U.S. Patent 6,741,746 (Epstein). The rejections are respectfully traversed.

The invention pertains to a data storage format that allows for proper color reproduction of color images that might include extended gamut regions, with proper color reproduction being possible in both devices that are compatible with extended gamut information, and devices that are incompatible such as legacy devices. According to the invention, there are three sections in the data storage format: a first section for storing color values in a limited gamut, a second section for storing information identifying image regions that have color value out of the limited gamut, and a third section for storing extended gamut color values for regions identified in the second section. For incompatible

legacy devices, color values in the first section are used for color reproduction. On the other hand, for compatible devices, color values are combined from the first section and the third section by using information in the second section.

Because incompatible legacy devices can use color values in the first section, color reproduction is performed properly in these devices which ordinarily need not even have knowledge that the second and third sections exist. On the other hand, since compatible devices can use information in all three sections, color reproduction is properly performed. Thus, good color reproduction is obtained both for compatible and incompatible legacy devices.

Moreover, because the second section stores information identifying regions that have color values out of the limited gamut, it is possible to lessen the number of color values that are stored in the third section. The existence of the second section means that extended gamut color values of the full image are not ordinarily stored in the third section and the amount of memory used can be significantly less than if color values of the full image are stored.

McCarthy '983 provides a file format for the representation of a digital image having an extended color gamut in a color space with only a limited color gamut. According to McCarthy '983, a color adjustment function 22 maps the digital image with the extended color gamut so that it fits within the limited color gamut. A digital file 27 is thereafter formatted so that it includes the digital image in the limited color gamut, together with information describing the color adjustment function. It is said that this allows reconstruction of the original, extended color gamut digital image by systems that know

how to make use of the color adjustment function information, while legacy devices are able to display and manipulate the limited color gamut digital image with no computational disadvantage relative to the prior art.

The invention, on the other hand and as described above, is directed to a data storage format that includes three sections: a first section for storing color values in a limited gamut color space, a second section for storing information identifying regions that have color values out of the limited gamut, and a third section for storing the extended gamut color values for regions that are identified in the second section.

The invention is therefore very different from McCarthy '983. Although it is true that both store an image in a limited gamut color space, extended color gamut information is stored in completely different ways. McCarthy '983 stores information describing a color adjustment function used to fit the extended gamut within the limited gamut. The invention, on the other hand, stores information identifying regions, and stores the extended gamut color values for those regions.

At pages 6 and 7, the Office Action equates McCarthy's information 25 with the second section of the invention (i.e., the section that identifies regions having an extended color gamut), and equates McCarthy's file 27 with the third section (i.e., the section that stores the extended gamut data). It is submitted that this correspondence has been drawn incorrectly. McCarthy's information 25 does not identify regions within an image that have color values outside a limited gamut, but rather describes a color adjustment function. McCarthy uses the functions to fit an extended gamut image within a limited gamut, and says that the color adjustment function 22 typically involves a gamut-

compression strategy (see column 5, line 43). As these functions are understood, however, none of them stores information identifying regions that have color values out of a limited gamut.

Moreover, nothing in McCarthy corresponds to the claimed third section, and the Office Action's citation to McCarthy's file 27 seems incorrect. File 27 stores the two pieces of information required by McCarthy's system (i.e., a limited gamut color image and an adjustment function), but does not store any additional information, and most certainly does not store extended gamut color values for regions identified in a second section. This shortcoming underscores a significant disadvantage of the McCarthy system as opposed to that of the present invention: McCarthy can reconstruct extended gamut information only to the extent that the color adjustment function is invertible (see column 5, line 31), whereas the present invention can recover extended gamut data in circumstances that McCarthy cannot since the invention includes a third section that stores extended gamut color values.

Epstein has been reviewed but is not seen to add anything to the above-noted deficiencies of McCarthy '983. Accordingly, it is respectfully submitted that the claims herein are fully in condition for allowance, and such action is courteously solicited.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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